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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,954	09/09/2003	Michael Crissy	EPH / 35	3045

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CINCINNATI, OH 45202

EXAMINER
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LUONG, VINH

ART UNIT	PAPER NUMBER
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3682

DATE MAILED: 04/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/657,954

Applicant(s)

CRISSY, MICHAEL

Examiner

Vinh T. Luong

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 9 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received

  
Vinh T. Luong  
Primary Examiner

**Attachment(s)**

- ✓ 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- ✓ 6) ☒ Other: Attachments 1 & 2

1. The Amendment filed on April 3, 2006 has been entered.
2. Applicant's election with traverse of *Group I* in the reply filed on April 3, 2006 is acknowledged. The traversal is on the ground(s) that the combination of claim 10 sets forth the details of the subcombination as separately claimed in claim 1. This is found persuasive, especially, in view of Applicant's amendment to claim 1 to recite "an open first end" in the same manner as claim 10. The restriction between Groups I and II is, therefore, withdrawn.
3. Applicant's election of the *species of Figs. 1-3* in the reply filed on April 3, 2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse. MPEP § 818.03(a).
4. Claims 9 and 18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on April 3, 2006.
5. The drawings are objected to because each part of the invention, such as, the inclined seating surface in claims 6, 7, 15, and 16, and the filled material in claims 8 and 17 should be designated by a referential numeral or character.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must

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be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

6. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claimed feature(s), such as, the filled material in claims 8 and 17 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

7. The disclosure is objected to because of the following informalities: each part of the invention, *e.g.*, the inclined seating surface in claims 6, 7, 15, and 16, and the filled material in claims 8 and 17 should be designated by a referential numeral or character. Appropriate correction is required.

8. Claims 7 and 16 are objected to because of the following informalities: the claim contains typographical error, *e.g.*, "80E" should have been "80°." Appropriate correction is required.

9. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter, *e.g.*, "an axially extending hub flange" in claims 2 and 11. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction is required.

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 1-8 and 10-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The terms, such as, “mountable” and “accessible” in claim 1 or 10 is vague and indefinite in the sense that things which may be done are not required to be done. For example, the insert flange 42 is accessible, but is not required structurally to be accessed through the service ports 34. See “discardable” in *Mathis v. Hydro Air Industries*, 1 USPQ2d 1513, 1527 (D.C. Calif. 1986), “crimpable” in *Application of Collier*, 158 USPQ 266 (CCPA 1968), “removable” in *In re Burke Inc.*, 22 USPQ2d 1368, 1372 (D.C. Calif. 1992), and “comparable” in *Ex parte Anderson*, 21 USPQ2d 1241, 1249 (BPAI 1992).

The recitation “said hub flange includes a rim and an inclined seating surface extending from said rim to said sleeve” in claim 6 or 15 is imprecise since the insert 14, not the hub flange, has the rim 47 and the seating surface. See paragraph [0021] of the specification and Fig. 2.

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 1, 5, and 8, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Wells (US Patent No. 3,200,665).

Regarding claim 1, Wells teaches a coupling structure mountable to a rotatable shaft (not shown) comprising: a polymer hub 18 having a plurality of service ports (unnumbered in Fig. 1. See Attachment 1); and a metallic insert 10 disposed radially inward from said polymer hub 18,

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said metallic insert 10 including a tubular sleeve 41 extending between a first end (Att. 1) capable of being mounted to the rotatable shaft and a second end (Att. 1) opposite said first end, and an annular insert flange 12 (Fig. 2) projecting radially outward from said second end, said insert flange 12 being accessible through said plurality of service ports (Att. 1) for applying a force to said insert flange 12 capable of removing the coupling structure from the rotatable shaft when mounted thereto.

Claim 1 and other claims below are anticipated by Wells since Wells teaches each and every positively claimed element. Note that as a matter of linguistic precision, the optional claim element (*i.e.*, “a rotatable shaft”) does not narrow claim, since it can always be omitted. *In re Johnston*, 77 USPQ2d 1788, 1790 (Fed. Cir. 2006). In addition, it has been held that the recitation that an element is “capable of” performing a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138 (CCPA 1946).

Regarding claim 5, said tubular sleeve 11 is inherently dimensioned to provide a press fit with the rotatable shaft when mounted thereto. See *In re Johnston, supra*.

Regarding claim 8, said sleeve 11 includes at least one annular concavity (unnumbered). The concavity is located between two teeth 14. See Att. 1) filled with material from said polymer hub 18 for preventing relative rotation between said metallic insert 11 with said polymer hub 18.

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

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international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

15. Claims 1 and 10 are further rejected under 35 U.S.C. 102(e) as being anticipated by

Nichols (US Patent No. 6,875,113 B2)

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claim 1, Nichols' embodiment of Fig. 7 teaches a coupling structure mountable to a rotatable shaft 11 comprising: a polymer hub 18 having a plurality of service ports 30; and a metallic insert 16 disposed radially inward from said polymer hub 18, said metallic insert 16 including a tubular sleeve 48 extending between a first end (Att. 2) capable of being mounted to the rotatable shaft 11 and a second end (Att. 2) opposite said first end, and an annular insert flange 80 (Att. 2) projecting radially outward from said second end, said insert flange 80 being accessible through said plurality of service ports 30 for applying a force to said insert flange 80 capable of removing the coupling structure from the rotatable shaft 11 when mounted thereto.

Note that, on the one hand, the element 80 in Nichol's embodiment of Fig. 7 is similar to the flange 50 in Fig. 6, on the other hand, *Webster's II New Riverside University Dictionary*, 1994, defines "flange" as "a protruding rim, edge, rib, or collar, as on a wheel or a pipe shaft,

used to strengthen an object, hold it in place, or attach it to another object.” Therefore, Nichols’ element 80 at the second end of the insert 16 “reads on” the claimed flange.

Regarding claim 10, see regarding claim 1 above and further note inertia member 17 and elastomer layer 15.

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

18. Claims 1-8 and 10-17, as best understood, are rejected under 35 U.S.C. 103(a) as being obvious over Nichols (US Patent No. 6,875,113 B2).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention “by another”; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter



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disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Regarding claim 1, Nichols teaches a coupling structure mountable to a rotatable shaft 11 comprising: a polymer hub 18 having a plurality of service ports 30; and a metallic insert 16 disposed radially inward from said polymer hub 18, said metallic insert 16 including a tubular sleeve 48 extending between a first end capable of being mounted to the rotatable shaft 11 and a second end opposite said first end, and an annular insert flange 50, 61 (Fig. 5, *id.* col. 9, lines 5-14) projecting radially outward from a location between said first and second ends, said insert flange 50, 61 being accessible through said plurality of service ports 30 for applying a force to said insert flange 16 capable of removing the coupling structure from the rotatable shaft 11 when mounted thereto.

Nichols teaches the invention substantially as claimed. However, Nichols' flange projects radially outward from a location between the first and second ends instead of the second end.

It is common knowledge in the art to rearrange the location of Nichols' insert flange to the second end in order to prevent separation of the hub and the insert. The insert flange at the second end of the insert is notoriously well known as evidenced by, *e.g.*, US Patent No.

3,200,665 issued to Wells and Figs. 4 and 16 of US Patent No. 4,722,722 issued to Rampe. See also legal precedents regarding rearrangement of parts in MPEP 2144.04.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to rearrange the location of Nichols' insert flange to the second end in order to prevent separation of the hub and the insert as taught or suggested by common knowledge in the art. Alternatively, to rearrange the location of Nichols' insert flange to the second end would have been an obvious choice in design because the claimed structure and the function it performs are the same as the prior art. *In re Chu*, 66 F.3d 292, 36 USPQ2d 1089 (Fed. Cir. 1995) citing *In re Gal*, 980 F.2d 717, 719, 25 USPQ2d 1076, 1078 (Fed. Cir. 1992).

Regarding claim 2, said polymer hub 18 includes an axially-extending hub flange 32 (Fig. 2) disposed radially outward of said sleeve 48, and said service ports 30 are partially inset within said hub flange 32 to define axially-extending channels 32, 34 (Fig. 2).

Regarding claim 3, said channels 32, 34 extend along the entire axial extent of said hub flange 32 to said insert flange 50.

Regarding claim 4, a portion of said insert flange 50 projects radially into each of said plurality of service ports 30. See Fig. 4.

Regarding claim 5, said tubular sleeve 48 is dimensioned to provide a press fit with the rotatable shaft 11 when mounted thereto.

Regarding claim 6, said hub/insert flange 50 includes a rim 56 and an inclined seating surface 54 extending from said rim 56 to said sleeve 48

Regarding claim 7, said metallic insert 16 is centered about a longitudinal axis, and said inclined seating surface 54 is angled relative to said longitudinal axis. The angle of about 80° is

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considered as a matter of choice in design since the claimed structures and the function they perform are the same as Nichols. *In re Chu, supra*.

Regarding claim 8, said sleeve 48 includes at least one annular concavity (unnumbered. See Attachment 2) filled with material from said polymer hub 18 for preventing relative rotation between said metallic insert 16 with said polymer hub 18. Note that *Webster's II New Riverside University Dictionary*, 1994, defines "concavity" as "a concave surface, structure, or line." Thus, Nichols' concave surface or line "reads on" Applicant's "concavity."

Regarding claim 10, see regarding claim 1 above and further note a torsional vibration damper 10, an annular inertia member 17, and an elastomer layer 15 disposed radially inward from said inertia member 17. *Ibid.* col. 4, line 5 *et seq.*

Regarding claims 11-17, see regarding claims 2-8 above.

19. Claims 1 and 10 are directed to an invention not patentably distinct from claims 1, 7, 9 and 14 of commonly assigned US Patent No. 6,875,113 B2 (hereinafter "Pat.'113). Specifically, claims 1 and 10 of this application and claims 1, 7, 9, and 14 claim common elements, such as, a polymer hub/body, a metallic insert, and service ports. See obviousness type double patenting rejection below.

20. The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP Chapter 2300). Commonly assigned assignee, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the

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assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications pending on or after December 10, 2004.

21. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned

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with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

22. Claims 1 and 10 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 7, 9, and 14 of Pat.'113. Although the conflicting claims are not identical, they are not patentably distinct from each other because Applicant apparently uses different terminologies in order to claim substantially the same invention. *In re Griswold*, 150 USPQ 804 (CCPA 1996). See, e.g., the comparison between claim 1 of this application and claims 9 and 14 of Pat.'113 below.

<u>Common</u>	<u>Appl.'954</u>	<u>Pat.'113</u>
	coupling structure	hub
	polymer hub	polymer body
metallic insert	(claim 1)	(claims 9 & 14)
	tubular sleeve	
	insert flange	support flanges
service ports		

Although claims 1 and 10 of this application recite “an annular insert flange,” meanwhile, claims 1, 7, 9, and 14 of Pat.'113 recite “a plurality of support flanges,” however, the indefinite article “a” or “an” in patent parlance carries the meaning of “one or more” in open-ended claims containing transitional phrase “comprising.” *KCJ Corp. v. Kinetic Concepts Inc.*, 55 USPQ2d

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1835 (Fed. Cir. 2000). In other words, the recitation “an insert flange” in claims 1 and 10 broadly covers the recitation “a plurality of support flanges” in Pat.’113. To the extent that claims 1, 7, 9, and 14 of Pat.’113 further call for, *inter alia*, “an angular spacing about a circumference of the insert,” meanwhile, the claims in this application do not, the angular spacing between the plurality of support flanges would have been considered as a matter of choice in design since the claimed structures (*i.e.*, a plurality of support flanges) and the function they perform are the same as a single support flange as evidenced by the embodiment of Fig. 5 of Pat.’113. See *In re Chu, supra*.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the coupling structure/damper claimed in claims 1 and 10 of this application as taught or suggested by claims 1, 7, 9, and 14 of Pat.’113 or *vice versa*.

23. Claims 2-4, 6, 7, and 10-17, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Wells in view of Nichols.

Regarding claims 2 and 3, Wells teaches the invention substantially as claimed. However, Wells does not teach the service ports being partially inset within the hub flange to define axially extending channels along the entire axial extent of the hub flange to the insert flange.

Nichols teaches the service ports 30 being partially inset within the hub flange 32 to define axially extending channels 32, 34 along the entire axial extent of the hub flange 32 to the insert flange 50 in order to lock the insert to the hub. See Nichols’ abstract and summary of invention.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to make Wells' service ports being partially inset within the hub flange to define axially extending channels along the entire axial extent of the hub flange to the insert flange in order to lock the insert to the hub as taught or suggested by Nichols.

Regarding claim 4, Nichols teaches the insert flange 50 projects radially into each of said plurality of service ports 30 as seen in Fig. 4 in order to facilitate the removal of the coupling from the shaft.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to make Wells' insert flange projecting radially into each of said plurality of service ports in order to facilitate the removal of the coupling from the shaft as taught or suggested by Nichols.

Regarding claims 6 and 7, Nichols teaches a rim 56 and an inclined seating surface 54 extending from said rim 56 to said sleeve 48 such that said inclined seating surface 54 is angled relative to said longitudinal axis in order to facilitate the removal of the coupling from the shaft as taught or suggested by Nichols.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to make Wells' hub flange including a rim and an inclined seating surface extending from said rim to said sleeve such that said inclined seating surface is angled relative to said longitudinal axis in order to facilitate the removal of the coupling from the shaft as taught or suggested by Nichols. The angle of about 80° is considered as a matter of choice in design since the claimed structures and the function they perform are the same as Nichols. *In re Chu, supra.*

Regarding claim 10, Wells teaches the invention substantially as claimed. See the rejection above. Wells further teaches the inertia member 22. However, Wells does not teach the elastomer layer for damping the vibration.

Nichols teaches the elastomer layer disposed radially inward from the inertia member in order to damp the vibration.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the elastomer layer disposed radially inward from Wells' inertia member in order to damp the vibration as taught or suggested by Nichols.

Regarding claims 11-13, 15, and 16, see regarding claims 2-4 and 6-7 above.

Regarding claim 14, the sleeve of Wells or Nichols is dimensioned to provide a press fit with the rotatable shaft when mounted thereto. See optional claim elements in *In re Johnston, supra*.

Regarding claim 17, Wells' sleeve 11 includes at least one annular concavity (Att. 1) filled with material from said polymer hub 18 for preventing relative rotation between said metallic insert 11 with said polymer hub 18.

24. Claim 10, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Wells in view of Hendrian (US Patent No. 6,216,327).

Wells teaches the invention substantially as claimed. See the rejection above. Well further teaches the inertia member 22. However, Wells does not teach the elastomer layer for damping the vibration.

Hendrian teaches the elastomer layer 51 disposed radially inward from the inertia member 53 in order to damp the vibration.



It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the elastomer layer disposed radially inward from Wells' inertia member in order to damp the vibration as taught or suggested by Hendrian.

25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Hundt et al. (insert 20, 52, etc.), Bertinetti et al. (insert 9), Rampe (Figs. 4 and 16), Chevalier (insert in Figs. 4-10), and Hans (Fig. 1).


26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vinh T. Luong whose telephone number is 571-272-7109. The examiner can normally be reached on Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Luong

April 26, 2006



Vinh T. Luong  
Primary Examiner

# **ATTACHMENT 1**

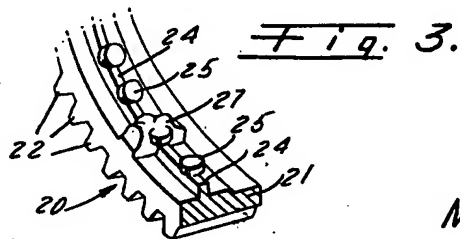
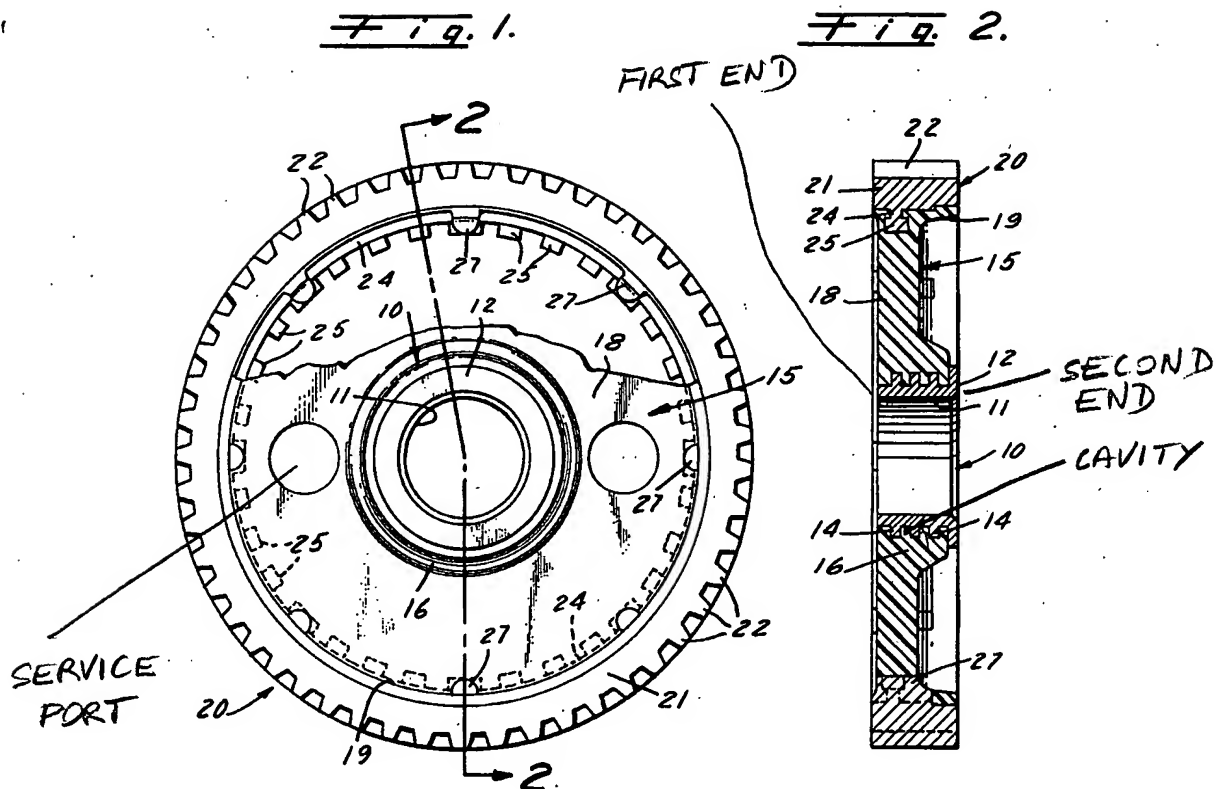
Aug. 17, 1965

M. WELLS

3,200,665

GEARS

Filed Feb. 14, 1963



Martin Wells,  
INVENTOR.

WHANN & McMANIGAL  
Attorneys for Applicant

by *[Signature]*

# **ATTACHMENT 2**

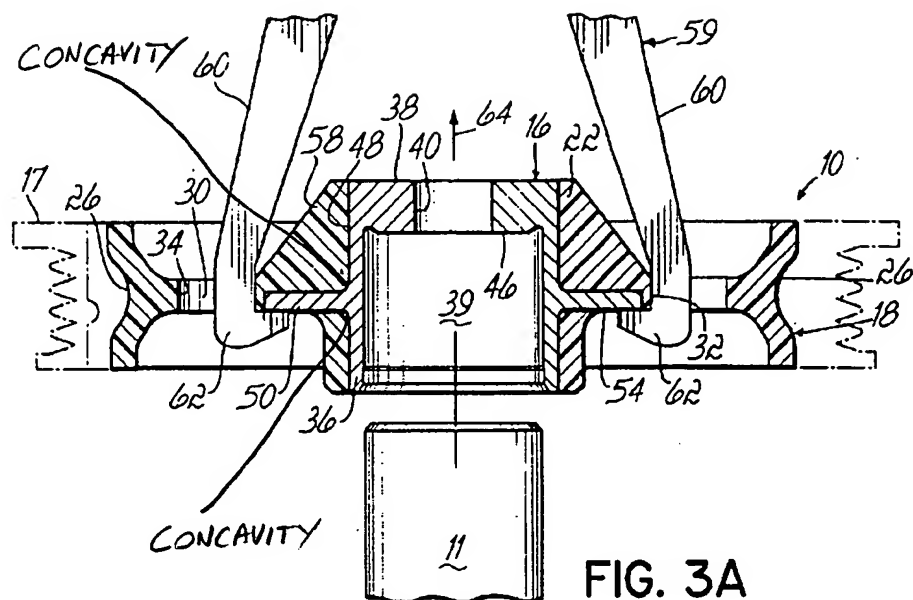


FIG. 3A

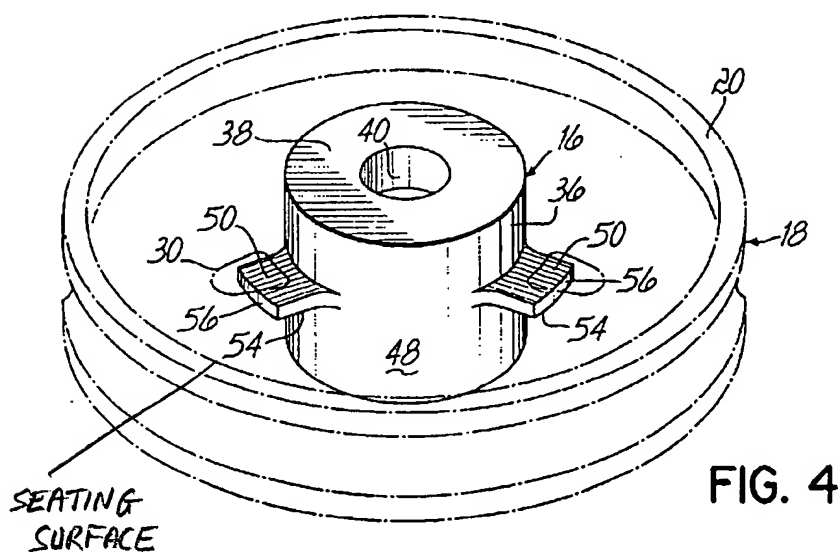


FIG. 4

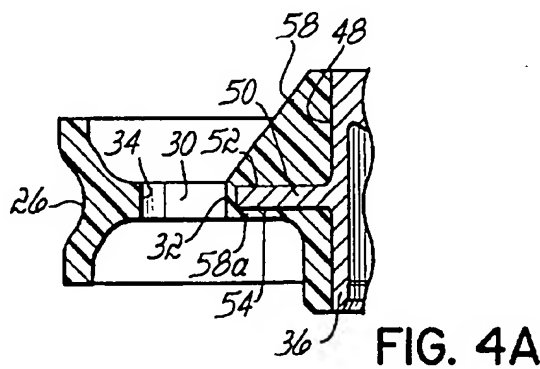


FIG. 4A

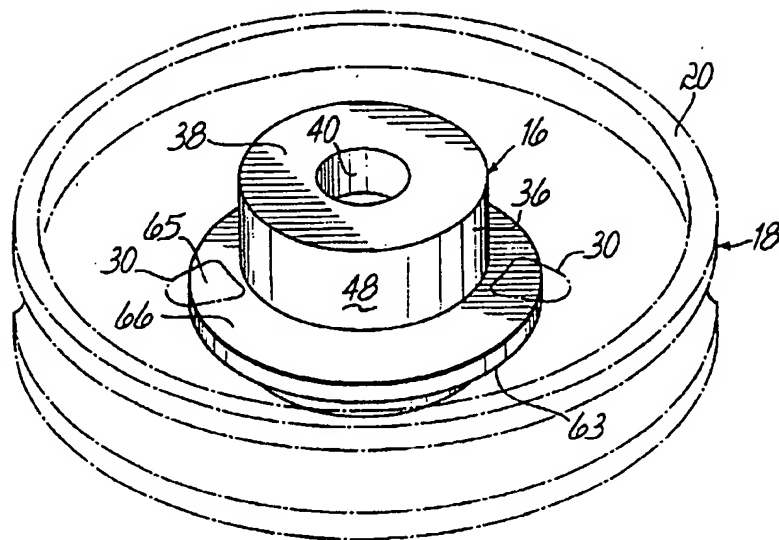


FIG. 5

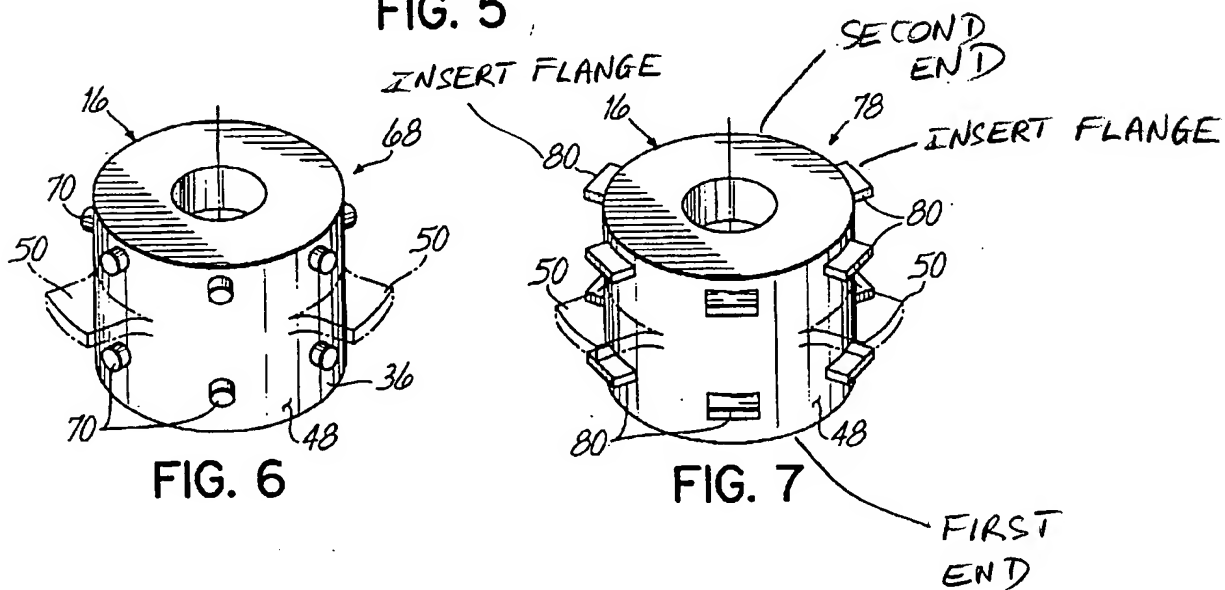


FIG. 6

FIG. 7

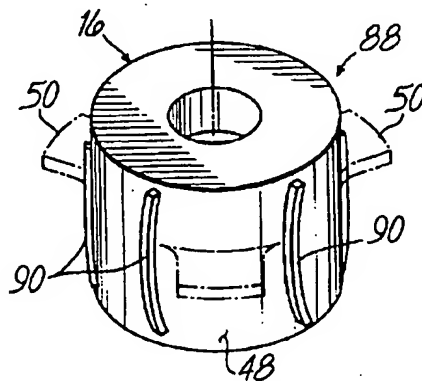


FIG. 8